

## CLAIMS

We Claim:

1. A method for use in a networked computing environment for providing imaging services in response to a request for an imaging job, comprising:

providing an information store, said information store comprising (1) one or more virtual device server groups, each comprising one or more virtual device servers, and (2) one or more virtual imaging device groups, each comprising one or more virtual imaging devices,

each of said virtual device server groups being associated with a physical imaging server group comprising one or more physical imaging servers,

each of said virtual device servers in a virtual device server group being associated with a physical imaging server of a corresponding physical imaging server group,

each of said virtual imaging device being associated with one or more physical imaging device; and

allocating said imaging job to one of said virtual imaging devices and one of said virtual device servers for processing at one of said physical imaging devices.

2. A method as recited in claim 1 wherein said virtual imaging device group includes one or more routing devices.

3. A method as recited in claim 1 further comprising monitoring the health of said physical imaging servers.

4. A method as recited in claim 3, wherein said monitoring is accomplished by enabling constant interaction between multiple physical imaging servers.

5. A method as recited in claim 1 further comprising load balancing between two or more physical imaging servers.

6. A method as recited in claim 1 further comprising automatic detection and configuration of physical imaging servers

7. A method as recited in claim 1 further comprising replicating information between two or more physical imaging servers.

8. A method as recited in claim 1 further comprising load balancing between two or more network imaging devices.

9. A method as recited in claim 1 wherein said network imaging device is a network printer.

10. A method as recited in claim 1 wherein said network imaging device is a network fax.

11. A method as recited in claim 1 wherein said network imaging device is a network scanner.

12. A method for use in a networked computing environment for fault tolerance and high availability printing comprising:

providing a hierarchical schema representation of physical network components for the processing of requested print jobs, wherein said schema representation provides transparency of printer names and locations;

managing print jobs across one or more print servers; and

managing the routing of print jobs to one or more network printers.

13. A method as recited in claim 12, wherein said managing across said print servers includes preserving the integrity of print jobs as print jobs are switched between said print servers.

14. A method as recited in claim 12, wherein said managing across said print servers includes preserving the integrity of print jobs as print jobs are routed from a first network printer to a second network printer.

15. A method as recited in claim 12 further comprising load balancing of print queues among said print servers.

16. A method as recited in claim 12 further comprising load balancing of printing among said network printers.

17. A method for use in a networked computing environment for imaging on one or more physical imaging devices wherein the physical imaging devices are de-coupled from one or more physical imaging servers to enhance the availability of imaging devices, comprising,;

providing an information store, said information store comprising (1) one or more virtual device servers, and (2) one or more virtual imaging devices,

each of said virtual device servers being associated with a physical imaging server,

each of said virtual device servers being associated with one or more virtual imaging devices,

each of said virtual imaging device being associated with one or more physical imaging device;

detecting the presence of said one or more physical imaging servers on said network and enabling fail-over between a first physical imaging server and a second physical imaging server; and

managing and balancing imaging distribution between said physical imaging servers and said physical imaging devices.

18. A computer readable medium having computer executable instructions for performing a method for use in a networked computing environment for providing imaging services comprising:

providing an information store, said information store comprising (1) one or more virtual device server groups, each comprising one or more virtual device servers, and (2) one or more virtual imaging device groups, each comprising one or more virtual imaging devices,

each of said virtual device server groups being associated with a physical imaging server group comprising one or more physical imaging servers,

each of said virtual device servers in a device server group being associated with a physical imaging server of a corresponding physical imaging server group,

each of said virtual imaging device being associated with one or more physical imaging device; and

providing a central file share, said file share including imaging job queues and imaging job assignments; and

allocating said imaging job queues from said central file share to one of said virtual device servers and one of said virtual imaging devices for processing at one of said physical imaging devices.

19. A computer system having a processor, a memory and an operating environment, the computer system operable to execute a method for use in a networked computing environment for providing imaging services comprising:

providing an information store, said information store comprising (1) one or more virtual device server groups, each comprising one or more virtual device servers, and (2) one or more virtual imaging device groups, each comprising one or more virtual imaging devices,

each of said virtual device server groups being associated with a physical imaging server group comprising one or more physical imaging servers,

each of said virtual device servers in a virtual device server group being associated with a physical imaging server of a corresponding physical imaging server group,

each of said virtual imaging device being associated with one or more physical imaging device; and

providing a central file share, said file share including imaging job queues and imaging job assignments; and

allocating said imaging job queues from said central file share to said virtual devices.

20. A computer readable medium having computer executable instructions for performing a method for use in a networked computing environment for fault tolerance and high availability printing comprising:

providing a hierarchical schema representation of physical network components for the processing of requested print jobs, wherein said schema representation provides transparency of printer names and locations;

each of said print jobs being managed across one or more print servers; and

each of said print jobs being routed to one or more network printers.

21. A computer system having a processor, a memory and an operating environment, the computer system operable to execute a method for use in fault tolerance and high availability printing comprising:

providing a hierarchical schema representation of physical network components for the processing of requested print jobs, wherein said schema representation provides transparency of printer names and locations;

each of said print jobs being managed across one or more print servers; and

each of said print jobs being routed to one or more network printers.